

## PHYSICAL ACITIVITY AND SYMPTOMS OF MENTAL DISORDERS IN BOSNIAN WOMEN

<sup>1</sup>Šejla Šerifović Šivert, <sup>2</sup>Amra Nožinović Mujanović, <sup>3</sup>Hasnija Nurković

<sup>1</sup>Philosophy faculty, Department of Pedagogy-Psychology, University of Tuzla

<sup>2</sup>Faculty of Physical Education and Sport, University of Tuzla

<sup>3</sup>University «Džemal Bijedić» in Mostar

*Original scientific paper*

### **Summary**

Although physical activity is often an indicator of positive mental state, reasons for exercising are numerous. Depending on the motivation, intensity and other factors, physical activity can have both positive and negative influence on women's mental health. The goal of this study was to find out if women in Bosnia and Herzegovina are physically active and to what extent, and to determine if there is a significant relationship between physical activity and symptoms of depression and body dissatisfaction. A sample included 215 female participants from Tuzla Canton. The following scales were used: Stankard body rating figure scale for body dissatisfaction, Beck's depression inventory and demographic scale which was designed for this study.

Contrary to our expectations, there was no significant corelation between physical activity and symptoms of depression nor body dissatisfaction. Results were discussed in the context of current research about physical activity as a factor of mental health.

**Key words:** depression, body dissatisfaction, mental health

### **INTRODUCTION**

In addition to using diets, women often use physical acitivity in trying to achieve perfect body. Level of physical activity has been mentioned as a risk factor in developing body dissatisfaction (Ovens and Slade, 1987). Although physical activity can be a way to mental wellness, there are many reasons for exercising. Actually, reason for exercising as well as the intensity of exercise have shown to be a major indicetor of effects of physical activity on mental health, specifically, body dissatisfaction. Studies have demonstrated that women who exercise in order to keep their body slim have much greater level of body dissatisfaction then women who exercise because of socializing, health or mood (McDonalds and Thompson, 1992).

Relationship between intensity of exercise for loosing weight and the level of body dissatisfaction, Im and Pruitt (1991) have tested by dividing women in to three groups by the level of exercise (groups that exercised intensely, moderately and the one that did not exercise at all). They found that body dissatisfaction was more present in the group of women who exercised intensely then in the other two groups

even when the body weight was kept constant. In additon to a higher level of body dissatisfaction, first group demonstrated more negative attitudes about themselves. These results clearly demonstrate that highly structured and organized programs for exercise, especially when combined with controlled eating, could have negative effect on one's health.

On the other hand, physical acitivity such as sports and dance have a relaxing effect on the body. Sport has been mentioned as a protective factor in body dissatisfaction. Namely, studies have shown that girls who play sports have higher self-esteem, better self-image and much lower level of body dissatisfaction than girls who don't play sports (Tiggemann, 2001). Many psychologists propose physical acitivity and sports as part of the treatment for depression. Physical activity helps people to go beyond borders of physical body, to let go and loose themselves in time and space. As the above mentioned authors stated, the key to mental health and feeling body satisfaction is in the motivation and moderation.

The goal of this study was to find out if women are physically active and to what extent, and to learn

about relationship between physical activity, depression and body dissatisfaction in women from Bosnia and Herzegovina. It was assumed that physical activity will be in a negative correlation with depression and body dissatisfaction.

## METHODS

### Participants

A total of 215 participants from Tuzla Canton completed the survey. Age ranged from 17 to 60, with a mean age of  $32.63 \pm 16.63$ ; the most common age reported was 19. Participants reported a variety of educational backgrounds, including completion of elementary school (5.1%), high school (77.2%) two-year college (7.4%), university (8.4%) and master's degree (1.9%).

Participants scores on the Body-Mass Index (BMI) ranged from 15.50 to 36.70 with an average score of  $22.36 \pm 3.72$ .

61,9% of participants reported being physically active while 68% of them spent at least two hours in a physical activity a day ( $2,28 \pm 2,4$ ).

### Methods

In this study, following scales were used: Stunkard's body figure rating scale (Stunkard, Sorenson and Schulsinger, 1980) to measure level of body dissatisfaction, Beck's depression inventory (Beck, 1967), and a demographic scale which was created for this study.

Stunkard's body figure rating scale consists of 9 silhouettes, which progressively change from extremely thin to extremely fat with figure 3 or 4, which show endomorphic-muscular type of body.

Each figure is marked with a number from 1 to 9. Participants were asked to choose a number, figure, which most closely match their own body, figure which they wish to have and the one they consider ideal in their country. The level of body dissatisfaction was figured as a difference between ideal body figure and the current body figure or country ideal body figure and the current body figure. This instrument has reliable test-retest values of 0.71 to 0.92 and an adequate constructive validity (Stunkard, Sorenson and Schulsinger, 1980).

BDI was used to measure symptoms of depression or the manifestations of depression. It consists of 21 questions that participants fill out in about 10 minutes (Groth-Marnat, 1990). BDI has high internal consistency with alfa coefficient of 0,86

for clinical and 0,81 for non-clinical population (Beck, Steer and Garbin, 1988). It has Cronbach alfa coefficient of reliability of 0,93. Groth-Marnath (1990) measured test-retest reliability to be between 0,48 to 0,86 depending on the intervals between testing and the testing population. Richter and colleagues stated that BDI has high content validity and validity in differentiation between depressed and non-depressed people.

### Procedure

Participants completed questionnaires during a Psychology class at the University of Tuzla, at the local institutions ("Zagrebačka" bank, Public health center, Elementary school "Novi Grad") and in private homes. All participants were told about anonymity and confidentiality and that they can discontinue at any time, should they not feel like continuing? They were also informed about risk of participating which are that some questions related to depression could evoke negative reactions in people who have had psychological problems. They were told that should this happen, they will be able to talk with researchers and to get help. Additionally, they were told that they could speak to the researcher about the meaning of their answers in general.

After all questions were answered, participants received packets of questionnaires. After filling out questionnaires, thirteen girls were interested in the meaning of their answers, while only one women reported feeling upset. Researcher talked with her for about twenty minutes, gave her the phone number of clinical psychologist that she previously contacted.

## RESULTS

### Relationship between physical activity and symptoms of mental disorders

In the demographic questionnaire, participants were asked whether they are physically active and to what extent. Out of total number of participants, 61.9% reported being physically active; 6% of them exercised at least an hour a week, 17.2% two hours a week while 37.7% exercised three hours and more. 38% of participants reported not being physically active. Inconsistent with the hypothesis, no significant correlation was found between physical activity and depression and body dissatisfaction.

Figure 1.

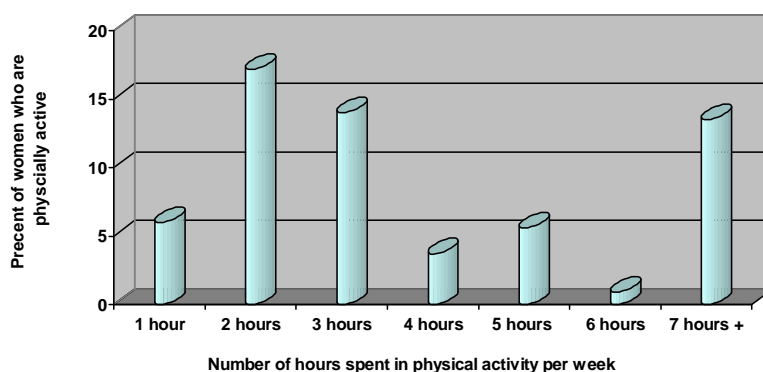
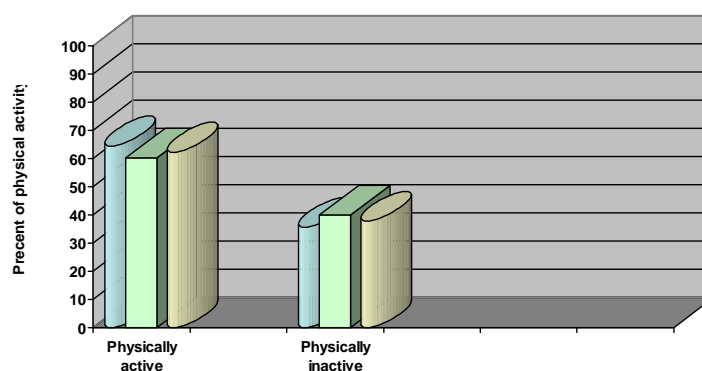


Figure 2.



## DISCUSSION

Inconsistent with the hypothesis, physical activity was not correlated to symptoms of depression nor body dissatisfaction. Two thirds of women stated that they are physically active while little more than one third claimed to spend more than three hours a week in physical activity. Current world studies have shown that it has relaxing effect on the body, serves as a protector against body dissatisfaction and is used in treating depression. In those studies, physical activity was mainly defined as a free activity, hobi. However, many women in our study stated that physical activity they were practicing was physical labor, house work, etc. It is possible that the results of this study would be quite different if women were specifically asked about physical activity such as sports and dance, only.

Possibly, the motivation for physical activity had a critical influence on the results. Recent studies have shown that women who exercised intensely in a highly structured and controlled programmes show worse self-image and higher level of body

dissatisfaction than women who exercise in a relaxed atmosphere and for health and socialization. It is possible that women in this study experienced their physical activity as an obligation (i.e. physical labor of village women) and that such activity does not bring the positive results like it does when it was chosen for care of self and the body. In the future studies, it would be interesting to separate those two kind of physical activity and to separately compare them with symptoms of mental disorders.

## CONCLUSION

Physical activity has been mentioned as a risk factor for body dissatisfaction. However, it has been shown to have quite positive effects on the mental health of many people. The key difference is in motivation and moderation. In this study, physical activity has not been correlated to symptoms of depression nor body dissatisfaction. Probable reasons for such results have been discussed.

## REFERENCES

1. Beck AT. *Depression: causes and treatment*. University of Pennsylvania Press, Philadelphia, 1967.
2. Beck AT, Steer RA, Garbin MG. *Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation*. *Clinical Psychology Review* 1988; 8: 77-100.

3. Blanchard EB, Jones-Alexander J, Buckley TC, Forneris CA. *Psychometric properties of the PTSD Checklist (PCL)*. Behaviour Research and Therapy 1996; 34: 669-673. Groth-Marnat G. The handbook of psychological assessment (2<sup>nd</sup> ed.), John Wiley & Sons, New York, 1990
4. Imm PS, Pruitt J. *Body shape satisfaction in female exercisers and non-exercisers*. Women Health 1991; 17: 87-96.
5. McDonald K, Thompson JK. *Eating disturbance, body image dissatisfaction, and reasons for exercising: Gender differences and correlational findings*. International Journal of Eating Disorders 1992; 11: 289-292.
6. Owens RG, Slade PD. *Running and anorexia nervosa: An empirical study*. International Journal of Eating Disorders 1987; 6: 771-775.
7. Richter P, Werner J, Heerlien A, Kraus A, Sauer H. *On the validity of the Beck Depression Inventory; A review*. Psychopathology 1998; 31: 160-168.
8. Ruggiero KJ, Ben KD, Scotti JR, Rabalais AE. *Psychometric properties of the PTSD-Civilian version*. Journal of Traumatic Stress 2003; 16: 495-502.
9. Spielberg CD, Gorsuch RL, Lushene R, Vagg PR i Jacobs GA. *Manual for the State-Trait Anxiety Inventory (STAI Form Y)*, Consulting Psychologists Press, Palo Alto, 1983.
10. Stunkard A, Sorenson T, Schulsinger F. *Use of Danish Adoption Register for the study of obesity and thinness*. In S. Kety (Ed.) Genetics of neurological and psychiatric disorders (115-120), Raven, New York, 1980.
11. Thompson JK, Altabe MN. *Psychometric qualities of the figure rating scale*. International Journal of Eating Disorders 1991; 10: 615-619.
12. Tiggemann M. *The impact of adolescent girls' life concern and leisure activities on body dissatisfaction, disordered eating, and self-esteem*. The Journal of Genetic Psychology 2001; 162: 133-142.
13. Weathers FW, Litz BT, Herman DS, Huska JA i Keane TM. *PTSD Checklist – Civilian version.*: National Center for PTSD, Behavioral Science Divisio Boston, 1994.

## FIZIČKA AKTIVNOST I SIMPTOMI MENTALNIH POREMEĆAJA KOD BOSANSKIH ŽENA

*Originalni naučni rad*

### **Sažetak**

Iako je sama fizička aktivnost često pokazatelj pozitivnog mentalnog stanja, razlozi zbog kojih žene vježbaju su mnogobrojni. Zavisno od motivacije, intenzivnosti i drugih faktora fizička aktivnost može imati i pozitivne i negativne uticaje na mentalno zdravlje žena. Cilj ovog istraživanja bio je saznati da li se žene bave fizičkom aktivnošću i u kojoj mjeri, te ispitati odnos između fizičke aktivnosti i depresije i nezadovoljstva tijelom kod žena u Bosni i Hercegovini. Predpostavljeno je da će fizička aktivnost biti u negativnoj korelaciji sa depresivnošću i nezadovoljstvom tijelom. Uzorak je činilo 215 učesnica sa Tuzlanskog kantona. Za utvrđivanje postavljenog cilja korištene su: Stankardova skala tjelesnih figura za mjerenje stepena nezadovoljstva tijelom, Bekova skala depresivnosti za mjerenje stepena depresivnosti i demografski upitnik koji je napravljen za ovu priliku.

Nasuprot očekivanjima, nije pronađena statistički značajna korelacija između fizičke aktivnosti i simptoma depresije, niti nezadovoljstva tijelom. Rezultati su diskutovani u kontekstu značajnih svjetskih istraživanja o fizičkoj aktivnosti kao faktoru mentalnog zdravlja.

**Ključne riječi:** depresija, nezadovoljstvo izgledom tijela, mentalno zdravlje

Correspondence to:

Šejla Šerifović Šivert, Ph.D.  
Tuzla University  
Faculty of Philosophy,  
Department of Education and Psychology  
M. Fizovića Fiska 6  
75000 Tuzla, Bosnia and Herzegovina  
Phone: +387 62 450 375  
E-mail: Sejla.serifovic@gmail.com